

## **The 'Average' Barium Contents of High Calcium and Low Calcium Granitic Rocks**

In their influential paper, 'Distribution of the elements in some major units of the Earth's crust', published 48 years ago, which is frequently quoted even today, Turekian and Wedepohl (1961, Bull. Geol. Soc. America, v.72, pp.175-192) have assigned an 'average' value of 420 ppm Ba to what they refer to as 'High Ca Granitic Rock' (Ca = 25,300 ppm), and 840 ppm Ba to 'Low Ca Granitic Rock' (Ca = 5,100 pp.).

During a 25-year period from 1967 to 1992, I have analysed hundreds of samples of granitic rocks for Ba by wavelength-dispersive x-ray fluorescence spectrometry. A critical evaluation of the data obtained by me reveals that, the values of 420 ppm Ba assigned by Turekian and Wedepohl (1961) to 'High Ca Granitic Rock' and 840 ppm Ba to 'Low Ca Granitic Rock' should be revised to 900 ppm Ba and 400 ppm Ba, respectively.

I wish to request all analysts involved in the determination of Ba in granitic rocks to keep a record of their data so that, the 'average' values of Ba suggested by me for 'High Ca Granitic Rock' (900 ppm Ba) and 'Low Ca Granitic Rock' (400 ppm Ba) can either be refined further in future, or modified. – *S. Viswanathan, Hyderabad.*